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**PATENT APPLICATION**  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kuen-Yu Tsai  
Application No. 10/709,458  
Filed: 05/06/2004  
Title: METHOD FOR DESIGN OF MULTI-OBJECTIVE ROBUST CONTROLLERS

Examiner: Patel, Ramesh B.  
Group No.: 2121  
Confirmation No. 3457  
CERTIFICATE OF MAILING  
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 03/14/2008

Signed: /Cassandra Reynolds/  
Cassandra Reynolds

**FORM 1449**

**Other Documents**

Examiner Initial	No.	Author, Title, Place, Date (e.g. Journal) of Publication
	1	J. Doyle, "Analysis of feedback systems with structured uncertainties," IEE Proceedings, 129(6), part D, November 1982
	2	S. Skogestad et al, "Multivariable Feedback Control," John 1996
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	4	"Robust control toolbox 3 user's guide," The Mathworks, Inc. 2005
	5	R. Sanchez-Pena et al, "Robust Systems Theory and Applications," 1998
	6	A. Packard et al "Linear, multivariable robust control with a $\mu$ perspective," ASME J. of Dynamics, measurement, and Control, vol. 115 June 1993, pp. 426-438
	7	A. Dahleh et al, "Control of Uncertain Systems," 1996
	8	J. Doyle et al "State-space solutions to standard $H_2$ and $H_{\infty}$ control problems," IEEE Transactions on Automatic Control, 34(8): 831-847, 1989
	9	P. Gahinet et al "A linear matrix inequality approach to $H_{\infty}$ control," International J. Robust Nonlinear Control, (4)421-448, 1994
	10	B. Rafaely et al, " $H_2/H_{\infty}$ active control of sound in a headrest: design and implementation," IEEE Trans. Control System Technology, vol. 7, no. 1, January 1999
	11	P. Titterton, "Practical method for constrained-optimization controller design: $H_2$ or $H_{\infty}$ optimization with multiple $H_2$ and/or $H_{\infty}$ constraints," IEEE Proceedings of ASILO 1996
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	13	S. P. Wu et al, "FIR filter design via spectral factorization and convex optimization," in Applied Computational Control, Signal and Communications, 1997
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	16	A. Lanzon et al "A Frequency Domain Optimisation Algorithm for Simultaneous Design of Performance Weights and Controllers in mu-Synthesis", Proceedings of the 38th IEEE Conference on Decision and Control, Vol. 5, pp. 4523-4528, Phoenix, Ariz., USA, December 1999
	17	A. Lanzon, "A State-Space Algorithm for the Simultaneous Optimisation of Performance Weights and Controllers in muSynthesis", Proceedings of the 39th IEEE Conference on Decision and Control, Vol. 1, pp. 611-616, Sydney, Australia, December 2000
	18	A Lanzon, Ph.D. Thesis: "Weight Selection in Robust Control: An Optimisation Approach", University of Cambridge, UK, October 2000
	19	K. Tsai and H. Hindi, "DQIT: $\mu$ -synthesis without D-Scale Fitting," American Control Conference 2002, pp. 493-498
	20	K. Tsai, Design of Feedforward and Feedback Controllers by Signal Processing and Convex Optimization Techniques, chapter 2, chapter 3, and page 129-130
	21	H. Hindi et al, "Computing Optimal Uncertainty Models from Frequency Domain Data," IEEE Conference on Decision and Control, 3:2898-2905, December 2002
	22	B. Boulet et al An LMI Approach to IMC-Based Robust Tunable Control, American Control Conference 2003, pp 821
	23	V. Oppenheim et al, Discrete-Time Signal Processing, Prentice Hall, 1989
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.